

6th Oxford Tidal Energy Workshop (OTE 2018)

Programme

26th March 2018

- 11:00 - 11:10 Opening
- 11:10 - 12:25 Session 1: Array Modelling (1)
- 11:10 *Validation of an LES-ALM to simulate arrays of tidal turbines*
 Pablo Ouro (Cardiff University)
- 11:35 *Arrays of non-uniform blockage and resistance*
 Paul Bonar (University of Edinburgh)
- 12:00 *Field observations of rotor thrust and bypass-acceleration at a tidal fence*
 Merel Verbeek (TU Delft)
- 12:25 - 12:40 Poster Presentations (1)
- 12:40 - 14:00 Lunch
- 14:00 - 15:15 Session 2: Wake characteristics and turbulence (1)
- 14:00 *Investigating the fundamental nature of unsteady aerofoil response to gusts*
 Amanda Smyth (University of Cambridge)
- 14:25 *Unsteady hydrodynamics of full-scale tidal turbines*
 Gabriel Scarlett (University of Edinburgh)
- 14:50 *Unsteady loading in an array due to simulated turbulent onset flow*
 Hannah Mullings (University of Manchester)
- 15:15 - 15:30 Poster Presentations (2)
- 15:30 - 16:00 Coffee
- 16:00 - 17:15 Session 3: Array Modelling (2)
- 16:00 *Characterising array performance for different operating points*
 Tim Stallard (University of Manchester)
- 16:25 *A basin-scale comparison of constrained BEM and actuator disc models*
 Lei Chen (University of Oxford)
- 16:50 *The effects of uncertain bottom friction on estimates of tidal current power*
 Monika Kreitmair (University of Edinburgh)
- 18:45 - Drinks reception & Dinner
 St Edmund Hall, OX1 4AR

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- 9:25 - 10:40 Session 4: Turbine Design and Performance (1)
- 9:25 *An experimental evaluation of blockage corrections for cross-flow current turbines*
Hannah Ross (University of Washington)
 - 9:50 *A reduced order model to predict flows around cross-flow turbines*
Esteban Ferrer (Universidad Politécnica de Madrid)
 - 10:15 *Size matters: Investigation into “full scale” and geometry scaling of the helical Gorlov marine turbines*
Esther Quaintmere (University of Hull)
- 10:40 - 11:10 Coffee
- 11:10 - 12:25 Session 5: Turbine design and performance (2)
- 11:10 *Modelling tidal stream turbine and array interaction*
Matt Edmunds (Swansea University)
 - 11:35 *Influence of support structures on tidal turbine power output*
Subhash Muchala (University of Oxford)
 - 12:00 *CFD analysis of tidal range turbine draft tube wakes*
Ross Gwenter (Swansea University)
- 12:25 - 12:40 Poster Presentations (3)
- 12:40 – 14:00 Lunch
- 14:00 – 14:50 Session 6: Wake characteristics and turbulence (2)
- 14:00 *Measuring marine turbulence kinetic energy with 4- and 5-beam ADCPs*
Michael Togneri (Swansea University)
 - 14:25 *Recent developments to compute turbines interactions in an ambient turbulent flow*
Camille Choma Bex (Université du Havre)
- 14:50-15:00 Closing

Poster Presentations (1):

An English Channel model for the optimisation of tidal turbines in the Alderney Race
Zoe Goss (Imperial College)

Tidal asymmetry and its effect on capacity factor of tidal resource
Ahmad Firdaus (University of Oxford)

Acquiring flow and measurement data on a floating tidal energy converter
Thomas Lake (Swansea University)

Poster Presentations (2):

Dynamic modelling of floating tidal energy converters
Jack Hughes (Swansea University)

Hydroelastic modelling of composite tidal turbine blades
Federico Zilic (University of Oxford)

Coupling of WATTES and OpenFOAM codes for wake modelling behind close-packed contra-rotating vertical-axis tidal rotors
Ruiwen Zhao (University of Edinburgh)

Poster Presentations (3):

Misalignment of currents and waves at tidal energy sites
Matt Lewis (Bangor University)

Optimisation of tidal turbine blades for low velocity flow
Job Encarnacion (University of Strathclyde)